



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/822,198	04/02/2001	George R. Bailey	120162.201	9875

27160 7590 10/29/2004

PATENT ADMINSTRATOR  
KATTEN MUCHIN ZAVIS ROSENMAN  
525 WEST MONROE STREET  
SUITE 1600  
CHICAGO, IL 60661-3693

EXAMINER

SWERDLOW, DANIEL

ART UNIT	PAPER NUMBER
----------	--------------

2644

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/822,198	Applicant(s) BAILEY, GEORGE R.	
	Examiner Daniel Swerdlow	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2 April 2001 and 01 August 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 15-18, 21 and 22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19 and 20 is/are allowed.
- 6) ☒ Claim(s) 1 and 7-14 is/are rejected.
- 7) ☒ Claim(s) 2-6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/2/01, 9/10/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings were received on 1 August 2001. These drawings are acceptable.

### ***Election/Restrictions***

2. During a telephone conversation with Dr. Gilberto Villacorte on 21 October 2004 a provisional election was made with traverse to prosecute the invention of Species I, Claims 1 through 14, 19 and 20. Affirmation of this election must be made by applicant in replying to this Office action. Claims 15 through 18, 21 and 22 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

3. In the telephone conversation, examiner presented Claims 1 through 4 and 7 through 13 as generic claims to gradually connecting and/or disconnecting a load to/from a communications circuit without disruption by use a variable impedance element with the following species:

- Species I: Using a variable resistance (Claims 5, 6, 14, 19, 20).
- Species II: Using a variable inductance (Claim 15).
- Species III: Using a variable capacitance (Claim 16).
- Species IV: Using a variable mutual coupling transformer (Claims 17, 21, 22).
- Species V: Using a variable mutual coupling distributed element (Claim 18).

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 9 recites the limitation "the variable impedance element" in the 2<sup>nd</sup> line. There is insufficient antecedent basis for this limitation in the claim. To advance prosecution to the maximum degree possible, examiner makes a prior art rejection of Claim 9 assuming the recitation is intended as "a variable impedance element".

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Pitsch et al. (US Patent 5,859,906).

8. Regarding Claim 1, Pitsch discloses **applying and disconnecting** an automatic modem (i.e., **an unavoidable load**) to and from a telephone line (i.e., **a communications circuit**) by **gradually** increasing and decreasing the current drawn from the line **without** generating clicks (i.e., **data disruption**) (column 1, lines 47-52).

9. Claim 10 is essentially similar to Claim 1 and is rejected on the same grounds.

***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 1, 9 through 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vantill et al. (US Patent 3,708,634) in view of Pitsch.

12. Regarding Claim 1, Vantill discloses a telephone test set (i.e., **an unavoidable load**) that is **applied to and disconnected from** a telephone line (i.e., **a communications circuit**) (column 2, lines 3-33). Therefore Vantill anticipates all elements of Claim 1 except gradually applying or disconnecting the test set. Vantill further discloses the importance of avoiding loading effects such as clicks when the test set is connected (column 1, lines 23-31, 43-53). Pitsch discloses that by **gradually applying and disconnecting** a device to and from a telephone line (i.e., **a communications circuit**) generation of clicks (i.e., **data disruption**) is avoided (column 1, lines 47-52). It would have been obvious to one skilled in the art at the time of the invention to apply gradual connection and disconnection as taught by Pitsch to the test set taught by Vantill for the purpose of further reducing the disruptive clicks.

13. Regarding Claim 9, Pitsch further discloses gradually increasing (column 3, lines 29-32) and decreasing (column 4, lines 3-8) the current drawn (i.e., **controlling impedance versus time**) by a photo-darlington pair (i.e., **variable impedance element**) (Fig. 1, reference PD1).

14. Claim 10 is essentially similar to Claim 1 and is rejected on the same grounds.

Art Unit: 2644

15. Regarding Claim 11, Vantill further discloses a test set (i.e., **monitor access**) (column 2, lines 3-33) and Pitsch further discloses gradually increasing (column 3, lines 29-32) and decreasing (column 4, lines 3-8) the current drawn (i.e., **controlling variable resistance**) by a photo-darlington pair (i.e., **variable impedance element**) (Fig. 1, reference PD1).

16. Regarding Claim 14, Pitsch further discloses the **variable resistance element** being a light emitting diode (i.e., **adjustable light source**) (Fig. 1, reference LED1) **in operative proximity to** a photo-darlington pair (i.e., **photoresistor**) (Fig. 1, reference PD1) (column 3, lines 29-32; column 4, lines 3-8).

17. Claims 1, 7 and 10 through 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aponte et al. (US Patent 6,215,856) in view of Pitsch.

18. Regarding Claim 1, Aponte discloses a monitor (i.e., **an unavoidable load**) (Fig. 2, reference 218; column 3, lines 12-26) that is **applied to and disconnected from** telephone lines (i.e., **a communications circuit**) (column 1, lines 31-41). Therefore Aponte anticipates all elements of Claim 1 except gradually applying or disconnecting the test set. Aponte further discloses the importance of avoiding loading effects such as spurious signals, spikes, noise and distortion when the monitor is connected (column 1, lines 35-36). Pitsch discloses that by **gradually applying and disconnecting** a device to and from a telephone line (i.e., **a communications circuit**) generation of clicks (i.e., **data disruption**) is avoided (column 1, lines 47-52). It would have been obvious to one skilled in the art at the time of the invention to apply gradual connection and disconnection as taught by Pitsch to the monitor taught by Aponte for the purpose of further reducing the disruptive effects.

Art Unit: 2644

19. Regarding Claim 7, Aponte further discloses **separate** monitoring (i.e., **observation**) of input and output signals (i.e., **each direction of information flow**) (column 3, lines 12-22).

20. Claim 10 is essentially similar to Claim 1 and is rejected on the same grounds.

21. Regarding Claim 11, Aponte further discloses a monitor (i.e., **monitor access**) (Fig. 2, reference 218; column 3, lines 12-26) and Pitsch further discloses gradually increasing (column 3, lines 29-32) and decreasing (column 4, lines 3-8) the current drawn (i.e., **controlling variable resistance**) by a photo-darlington pair (i.e., **variable impedance element**) (Fig. 1, reference PD1).

22. Regarding Claim 12, Aponte further discloses tip and ring lines (i.e., **a wireline data circuit**) (Fig. 3; column 3, lines 47-52) and a fiber terminal (i.e., **a fiber optic data circuit**) (column 3, lines 36-37).

23. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aponte in view of Pitsch as applied to Claim 1 above, and further in view of Cubbison, Jr. (US Patent 5,504,736).

24. Regarding Claim 8, Aponte further discloses use of the monitor on network elements in general (column 3, lines 28-31) and **telecommunication lines** in particular (column 1, lines 22-24). Therefore, the combination of Aponte and Pitsch makes obvious all elements except the telecommunication lines being a digital subscriber line. Cubbison discloses the importance of monitoring **digital subscriber lines** (column 1, lines 14-20, 30-42) for qualifying and diagnosing these lines. It would have been obvious to one skilled in the art at the time of the invention to use the combination made obvious by Aponte and Pitsch on a digital subscriber line to perform the qualification and diagnosis disclosed as essential by Cubbison.

25. Claims 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Aponte in view of Pitsch as applied to Claim 12 above, and further in view of admitted prior art.

26. Regarding Claim 13, as shown above apropos of Claim 12, the combination of Aponte and Pitsch makes obvious all elements except a digital subscriber line, a duplex transmission scheme and modem means continuously adaptive to slow transmission media parametric changes. Applicant admits as prior art the SDSL system (i.e., **a digital subscriber line**) with transmission in both directions (i.e., **a duplex transmission scheme**) and **modems that continue to adapt to slow changes transmission characteristics** (Disclosure: page 5, lines 19-20, 26-27). It would have been obvious to one skilled in the art at the time of the invention to use the combination made obvious by Aponte and Pitsch on an SDSL line admitted a s prior art for the purpose of monitoring the line for qualification and diagnosis.

*Allowable Subject Matter*

27. Claims 2 through 6 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

28. Claims 19 and 20 are allowable.

29. The following is a statement of reasons for the indication of allowable subject matter:

30. Claim 2 claims the method of Claim 1 wherein the unavoidable load is presented by monitor access and the applying step comprises gradually applying a variable impedance to the line, connecting the monitor and gradually removing the variable impedance. As stated above



Art Unit: 2644

apropos of Claim 1, the combinations of either Vantill or Aponte in view of Pitsch make obvious all elements of that claim. In addition, as stated above apropos of, for example, Claim 11, both Vantill and Aponte further disclose monitoring access. However, the gradual connection method taught by Pitsch uses a variable impedance in series with the load that is gradually reduced to connect the load without disruption. As such, the prior art neither anticipates nor suggests gradually applying a variable impedance to the line, connecting the monitor and gradually removing the variable impedance. As such, Claim 2 is allowable matter.

31. Claims 3 through 6 are allowable matter due to dependence from Claim 2.

32. Claim 19 is essentially similar to Claim 2 with a variable photoresistor as the variable impedance and a relay as the connection means. As such, Claim 19 is allowable for reasons stated above apropos of Claim 2.

33. Claim 20 is essentially similar to Claim 2 with a pair of variable photoresistors coupled to a pair of resistors as the variable impedance. As such, Claim 19 is allowable for reasons stated above apropos of Claim 2.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel Swerdlow whose telephone number is 703-305-4088. The examiner can normally be reached on Monday through Friday between 8:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forrester Isen can be reached on 703-305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2644

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Daniel Swerdlow, Patent Examiner Art Unit 2644